UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,901	08/22/2003	Aaron James Gannon	H0003570--1623	1338

128 7590 10/31/2006

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER	
WOODS, ERIC V	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,901	GANNON, AARON JAMES	
	Examiner	Art Unit	
	Eric Woods	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8-24 and 28-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-24 and 28-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks pages 1-3, filed 5 September 2006, with respect to the rejection(s) of all claim(s) under various statutes have been fully considered and are partially persuasive.

The rejection of claim 17 under 35 USC 101 does not stand withdrawn. Any kind of computer program sent via transmission medium is nonstatutory, as per the Interim Guidelines on Patent Subject Matter Eligibility.

The rejection of claim 43 under 35 USC 112, first paragraph, stands withdrawn in view of applicant's pointing out support in the specification for the recited subject matter.

The rejection of claims 1-4, 8-24, and 28-44 under 35 USC 103(a) in view of various references stand withdrawn in view of applicant's amendments to the claims.

However, upon further consideration, a new ground(s) of rejection is made in view of various references as set forth below.

Examiner thanks applicant for admitting on page 2 of the Remarks that: "Duke et al has been thoroughly reviewed and while this reference may broadly suggest a straight zoom line that extends through a zoom point, and between a central point and a display area edge point to which the zoom line extends, nowhere does it disclose, or even remotely suggest at least the above noted features of independent claims 1, 21 **[such that the image edge point remains coincident with the display area edge point.]**"

As such, applicant appears to concede that Duke et al rendered the unamended version of claims 1 and 21 obvious.

Therefore, as noted above, it would appear that the only point that needs to be addressed as below is the above, bolded phrase (which is the only added limitation).

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 and 21-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unknown how the image edge point could remain coincident (1-to-1 mapping, see dictionary definition of this term) and still remain in the same place as the display area edge point, since the zoom point (and the surrounding areas) are being translated along the straight zoom line, where the surrounding points would therefore have to change positions so it would not be possible.

Claims 1-20 and 21-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. That is, the terms "coincident with" are only used twice in the specification where this is in the claims with respect to a zoom symbol being substantially coincident with the translation of a zoom point. The standard mathematical meaning for this term is:

"Two lines or plane congruent geometric figures which lie on top of each other are said to be coincident"; **OR** "In mathematics, a **coincidence point** (or simply **coincidence**) of two mappings is a point in their domain having the same image point under both mappings"

Clearly, if the points are coincident, then they cannot change, which means that no translation can take place or the points will no longer be coincident.

This is related to the enablement rejection above.

The dependent claims fail to correct the deficiencies of their parent claim(s).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 21-23, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duke et al (US 6,407,749) in view of Lee et al (US PGPub 2004/0233222 A1).

As to claims 1 and 21 (method and system, additional system limitations will be addressed in a separate addendum below the following),

In a display including one or more edges that define a display are in which at least a portion of an image including an edge point is displayed, a method of changing the relative size of the displayed image, comprising the steps of: (Duke defines a display device 17 in Figure that provides "means, in the known manner, to display all or a portion of graphic use data 12". Such known means clearly encompass standard displays such technologies as CRT, LCD, etc, as well known to one of ordinary skill in the art. Such display 17 shows graphic data 12 that is inherently an image, or at least a portion of an image. Such displays are finite in that they have a maximum size / resolution that therefore requires that images displayed on such displays have edges. These edges are composed of pixels, and therefore consist of points of information. Such edges therefore consist of edge points. The rest of the preamble, namely the statement of "a method of changing the relative size of the displayed image" is merely a recitation of intended use, while the Duke reference provides a method for zooming images (e.g. changing their relative size)(Abstract, 3:38-61), which is inherently

changing the relative size of an image on a display. The recitation "steps of" does not invoke or rise to the level required by *Donaldson*)

-Selecting a zoom point in the display image, the zoom point corresponding to a point in the displayed image that is to be zoomed, the image edge point located at a position on the display area edge that coincides with an edge point on the display area; and (Duke clearly teaches that the user selects a zoom point ("beginning pointer location" 30 in Figure 2A), where another point, which would constitute an edge point by extension ("ghost pointer location" 31 in Figure 2A), since a line is drawn between points 30 and 31 that constitutes a free vector recorded in virtual screen coordinates. Therefore, that vector would inherently cross the edge of the image or portion of the image to be zoomed. As noted above, the image edge point would be located a position on the display area edge that corresponds to or coincides with an edge point of the display area assuming that the image occupied the entire virtual window or screen space (note 4:27-63))

-Changing the relative size of the selected zoom point while (i) translated the selected zoom point along a straight zoom line that passes through the selected zoom point and extends between a central point in the display area and the display are edge point and (ii) maintaining the position of the image edge point **such that the image edge point remains coincident with the display area edge point.**

(Duke clearly teaches changing the relative size of the zoom point (e.g. zooming the display), for example moving the central point of the display along a line parallel to that of the zoom path desired by the user, where the vector created to do so (vector 33,

Figure 2A) extends from the central point of the display (point 27, Figure 2A)) and is parallel with and equal to (in magnitude) to the user director vector described above (4:27-63). Clearly the vector referred to above constitutes a 'straight zoom line', and the straight zoom point is clearly moved along that line. See Figure 2B, where clearly the original point 30 has been shifted along the vector to ghost pointer location 31, where the point 31 in Figure 2A has now become the original pointer location 30 in Figure 2B (4:62-67). Note in Figure 2B that the point which was at the end of the zoom line in Figure 2A – that is, the end of the zoom vector hit the bottom of the letter H – has been translated to the center of the screen, which therefore proves point (i), that the straight zoom lines passes through the central point of the display and therefore extends (by extension of the line) through the edge point. The next issue, that of 'maintaining the position of the edge point', is also met by the Duke reference. The operation that takes place is **translation**; that is, the points are being moved along a line. That operation is scale-invariant, in that points along a line retain the same spatial relationship regardless of how a point on the line is otherwise translated, since the formula for a line ($y = m * x + b$) is defined in terms of variables rather than set coordinates. Therefore, an edge point would retain the relationship to the center point during a **translation** operation. This is important for several reasons, as well be discussed below. Finally, the position of the edge point would be maintained as required by item (ii) and discussed below.)(Lee teaches that the points are moved along a zoom line as in Figure 9, with the magnified points moving along the line 920 as in Figure 9 [0085-0089], where the position of the edge points is preserved with respect to the center point. As illustrated in

Figure 10, the objects are translated along the straight zoom line specified in Figure 9, that is, the user selects the Model Zoom Point 901 and translates it along the long to the Optimum Viewing Point 903 as illustrated in Figure 9, where this is explained in [0086] as a process such that the unzoomed starting value (lambda=1, point 901, a zero translation) is connected to a translation via a vector equal to the required translation, moving the MVP towards the OVP via the intermediate point 902 which clearly illustrates the line 920, and it is clear in Figures 912 and 913 that line 920 passes through their edge equally at the same position such that it is in fact being precisely translated along the line without any shift in location)

Duke teaches most of the limitations of the instant claim (see below paragraphs for additional explanation), but fails to expressly teach that the display edge point and the image edge point remain coincident (taking the interpretation that such means they must remain on the same line and/or the like, where). Lee teaches this limitation as above with respect to Figure 9 (zoom / translating along a straight line). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Duke and Lee in such a way that the scrolling / translation / zoom techniques of Lee would be used in Duke, wherein this provides the advantages set forth above, particularly that the image is translated in such a way that the exact proportions relative to the zooming factor do not change, where this would improve the display of Duke and make it more accurate, as the situation in Figures 2A and 2B the 'H' would not

correspond perfectly to the proportion it had initially, where the system of Lee would allow such correspondence, which is beneficial to the user [0085-0090] and the like.

The Duke reference teaches, as does the general state of the art (see attached Written Opinion concerning patentability, Sheet 3), that a single action (e.g. a click, possibly pressing and/or moving a mouse) a user can enlarge and bring into the window an arbitrarily assumed zone of interest – see Duke, Figures 2A-2B: the point where the line drawn with the mouse ends defines the area of interest. According to the state of the art, the zone of interest is automatically translated into the center of the window without it being necessary to perform a scroll operation. Therefore, again, the edge point would still be on the same line as the center point and the 'zoom point' as recited in the instant claim after the translation / zoom operations in Figures 2A and 2B.

Next, the instant application bears out the above point that the edge point would retain its relationship to the center point during a translation operation. See Figure 9, where there is a desired zoom point 402 and a center point 210. The zoom line is drawn through those two points (see Figure 11). Now, the line happens to go through edge point 506/508. However, **that is beside the point**. The fact is that applicant is attempting to patent a fundamental of geometry. A line that is drawn through a zoom point and the central point will of necessity pass through an edge point. Such a line will automatically extend through an edge point. As explained above, merely translation a point along a line does not change the fact that it is still on the same line as the other points, **including the additional edge points**. However, this is not hindsight, merely a

fundamental of geometry (which is not patentable, since such qualifies as a law of nature or the like).

The definition of a line (e.g. the basic equation defining a two dimensional, linear relationship is found to be from basic geometry $y = m * x + b$, where that line extends infinitely along a two-dimensional plane. As such, a line -- which can be defined by two points, such as a zoom point and the center of a display, which has a form as follows: $(y - y_1) = (\frac{y_2 - y_1}{x_2 - x_1})(x - x_1)$ will inherently pass through an edge pixel of such a display, since such a line is infinitely long.

Therefore, the Duke reference implicitly teaches the idea of maintaining the position of the display edge point as mentioned above through geometry. Also, it is well known in the art that a region can be zoomed in and out (e.g. instead of designating merely a zoom point, a zoom box can be designated (see for example US 6,642,936 to Engholm et al), and that region can be moved around. If, for example, a region were to be designated versus merely a point, then the movement of the region (or portion of a region would obviously follow the techniques of the Duke patent, where the line would pass through an edge point of the aforementioned region, and the relationship between the zoom point, the center, and the edge point would thusly be preserved once the translated zoom region occupied the entire screen, as it would be for the case merely involving the zoom point. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Duke to be able to utilize a zoom box in addition to a zoom point.

As to claim 21, Duke provides a user interface (see tools shown in Figures 2A and 2B for zooming and the like and 4:20-5:25), a display device 17 in Figure 1, having an edge (and so forth, as set forth in the rejection to claim 1), and a processor (CPU 16, coupled to memory 11 containing various things, such as graphic user data, zoom factors, the software, and the like).

As to claims 3 and 23, Duke maps the selected zoom point to the center of the screen. Once a point is mapped to the center of the screen, there would be no need to translate it whatsoever if the desire were only to change the zoom level. It would be obvious that once the zoom point coincides with the center of the screen that it would no longer be moved, since any motion away from the center of the screen would be compensated for such that the point would automatically return to the center of the screen. Therefore, Duke discloses the invention as specified in the negatively limiting claims of claims 3 and 23.

As to claim 41, this is a broader version of claim 1, excluding the limitation from the first clause that "the image edge point located at a position on the display area edge that coincides with an edge point on the display area". Therefore, the rejection to claim 1 is incorporated by reference in its entirety. As noted by the CCPA (*In re Karlson*, 136 USPQ184 (1963)), the omission of an element (or step) and its function in a combination is an obvious expedient if the remaining elements or steps performs the same functions as before, which in the instant case they do. As noted above, the Lee reference performs the recited function.

As to claim 42, note that the system of Duke clearly has in Figure 2A many portions of non-edge-point image points (for example, the areas around the letters A, B, C, and the like) that are translated out of the zoom area in Figure 2B. Therefore the Duke reference meets the limitations of this particular claim. As noted above, the Lee reference performs the recited function.

As to claim 43, this is merely a broader version of claim 21, the rejection to which is incorporated by reference. As noted by the CCPA (*In re Karlson*, 136 USPQ184 (1963)), the omission of an element (or step) and its function in a combination is an obvious expedient if the remaining elements or steps performs the same functions as before, which in the instant case they do. As noted above, Duke Figure 2A clearly shows a set of displayed images that includes a plurality of image points aligned with the display edge – see right side of the display shown therein. Clearly, this constitutes a plurality of image points. Next, 'maintain the alignment' merely means that the image points must be held in their relative position to the image edge point, which as pointed out above would be inherent because the zoom point is translated on a line that crosses through the recited edge point, it's position on the edge relative to the other edge points would not change, as its position relative to the zoom point and the center point would not change. As noted above, the Lee reference performs the recited function.

As to claim 44, it is claim 42, except applied to the system claim, where that rejection is incorporated by reference. As noted above, the Lee reference performs the recited function.

Claims 2, 9, 11-19, 22, 29, and 32-39 are rejected under 35 U.S.C. 103(a) as unpatentable over Duke/Lee as applied to claims 1 and 21 above, and further in view of Kaizuka et al, an analogous art

As to claims 2 and 22, Duke/Lee Figure 2B clearly teaches that the invention may map the point at which the zoom is centered is mapped to the center of the screen. It would be obvious that once the zoom point coincides with the center of the screen that it would no longer be moved, since any motion away from the center of the screen would be compensated for such that the point would automatically return to the center of the screen. However, Duke/Lee does not expressly teach a maximum or minimum relative size.

Kaizuka et al. teaches of the invention of claims 2 and 22. Column 14, lines 1 – 3, states, "Thereafter, an image enlarged by a final zoom ratio and having a lower resolution than that of the image shown in FIG. 3C is displayed in the entire display frame 31, as shown in FIG. 3D." Lines 26 – 31 state, "In step S3, it is determined whether the image (zooming target) in the rectangular region 32 designated in step S1 is enlarged to the entire display frame 31. If NO in step S3, the flow advances to step S4 to increase the interpolation ratio and then returns to step S2 to perform the same processing as described above." Thus, Kaizuka teaches of inhibiting any further change in relative size once a final zoom ratio has been achieved. Additionally, Kaizuka determines if the zoomed image is enlarged to the entire display frame such that the

image reaches the central point in the display area and if so then stops processing the image.

Motivation for combining Duke/Lee and Kaizuka is taken from the fact that Kaizuka (2:65-3:20) provides a method for zooming images that does not require additional storage capacity, that can display images at high speed when zooming at the original precision (resolution), and the like, which would clearly improve the zooming capabilities of Duke/Lee.

Kaizuka et al. teaches of the invention of claims 9 and 29. However, Duke/Lee would seem to implicitly suggest it. Kaizuka Figures 3A – 3E and 8A – 8D show a rectangular border surrounding the selected zoom portion such that the border is translated substantially coincident with the translation of the selected zoom area.

Kaizuka et al. teaches of the invention of claims 11 and 31; Duke/Lee does not expressly teach this limitation. Kaizuka Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client."

Kaizuka et al. teaches of the invention of claims 12 and 32; Duke/Lee does not expressly teach this limitation. Kaizuka Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the client side is to be zoomed out to display a wider range, the above-described zooming processing can be

applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed.

Kaizuka et al. teaches of the invention of claims 13 and 33; Duke/Lee does not expressly teach this limitation. As shown in Kaizuka Figures 3A – 3E and 8A – 8D, each image point from an original position in the selected zoom portion is translated to a final position when changing the relative size of the selected zoom area.

Kaizuka et al. teaches of the invention of claims 14 and 34; Duke/Lee does not expressly teach this limitation. Kaizuka Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client."

Kaizuka et al. teaches of the invention of claims 15 and 35; Duke/Lee does not expressly teach this limitation. Kaizuka Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the client side is to be zoomed out to display a wider range, the above-described zooming processing can be applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed. By performing the process of figures 3A – 3E and 8A – 8D in a manner opposite to that which the zoom area was originally changed, it can be seen that each image point in the selected zoom area is translated along a substantially straight line from its final position to its stored original position when changing the relative size of the selected zoom point.

Kaizuka et al. teaches of the invention of claims 16 and 36; Duke/Lee does not expressly teach this limitation. Figure 19A shows an image with a plurality of arrows positioned next to the image for scrolling purposes. When scrolling an image, the positions of the image points in the image will be changed to updated positions. Thus, the final and original as well as each of the image points will be changed to an updated position. Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client." Additionally, Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the client side is to be zoomed out to display a wider range, the above-described zooming processing can be applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed. By performing the process of figures 3A – 3E and 8A – 8D in a manner opposite to that which the zoom area was originally changed with the updated scrolled image, it can be seen that each image point in the selected zoom area is translated along a substantially straight line from its changed final position to its changed original position when changing the relative size of the selected zoom point.

Kaizuka et al. teaches of the invention of claims 17 – 19 and 37 – 39; Duke/Lee does not expressly teach this limitation. Kaizuka teaches of both a zoom-in and a zoom-out process whereby the two are performed in a manner opposite to each other.

Thus, after performing a zoom-in and zoom-out process on an image, the original image is available to the user once again. Upon selecting a new zoom portion after having already changed the image by zooming in and out, the new zoom portion original position is its position before the relative size of the previously selected zoom point was changed. Additionally, as seen in figures 3A – 3E and 8A – 8D, the zoom portion is translated along an original zoom line that is a substantially straight line that passes through the new zoom point original position and extends between the display area central point and a display area edge point that is closes to the new zoom point. By translating the new zoom portion to the center of the frame, the relative size of the new zoom area is changed and occupies a position it would have occupied had the new zoom area been the previously selected zoom area. Thus, the new zoom area is moved from its present location as shown in figures 3A and 8A to a new position on the new zoom area original zoom line as shown in figures 3E and 8D.

Claims 20 and 40 are rejected under 35 USC 103(a) as unpatentable over Duke, Lee, and Kaizuka as applied to claims 1 and 21, and further in view of Kato (US 6,333,996).

As to claims 20 and 40, the processor of Lee clearly moves through the display area central point and the new zoom point on the display since the line is linear and the image is moved directly along the line, but Lee does not teach averaging zoom lines and the like. It is well known in the art (as per Kato 21:10-25) that the user inputs

writing or lines at various rates. Since the system of Duke has user input, it is well known (from Kato) to use an average handwriting rate to achieve better accuracy and precision and the like with respect to user input (20:20-22:50), it would have been obvious to one of ordinary skill in the art at the time the invention was made to use average inputs, e.g. the average the user input line with the old line to account for user jitter when drawing the desired input / scroll / zoom line as in Duke, for the at least the reasons specified above.

Claims 4, 8, 24, and 28 are rejected under 35 USC 103(a) as unpatentable over Duke/Lee as applied to claim 1 in view of Grossman.

Duke/Lee does not expressly teach this limitation. Grossman teaches that the image is zoomed in and out in [0036-0037 and 0039-0042], where the distance between screen pixels of a map or the like in a Cartesian coordinate system will be increased after a zoom in. Clearly, since the display screen has finite size, this will prima facie involve the translation of at least some portion of the display screen off of the visible screen area, since the map is translating automatically to the center of the display if the image is being zoomed. Additionally, while zooming in further, it is obvious that a portion of the display area that is not part of the selected zoom area will be translated out of the displayed frame. One would have been motivated to make such a modification at the time the invention was made to the invention of Duke/Lee by modifying it in light of Grossman so that a user may be able to further zoom in on an area of interest in order to view that section in greater detail.

As to claims 8 and 28, clearly Grossman teaches that the image is scaled around the specified zoom point; therefore, both the entire displayed image and the zoom point would be enlarged in a simultaneous manner, and motivation is taken from the rejection of claim 4 above.

Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duke/Lee and Kaizuka as applied to claims 9 and 29 above, respectively, and further in view of Conrad et al.

Kaizuka et al. teaches of the invention of claims 10 and 30 except removing the zoom symbol from the display area when the cursor symbol is moved; Duke/Lee does not expressly teach this limitation. Kaizuka Column 17, lines 11 – 16, describe displaying a cursor symbol in the display area. "On the displayed image shown in FIG. 8A, a mouse cursor 33 is moved to the central point or an arbitrary point of a rectangular region (the region has similar shape to the display frame 31, and the similitude ratio is determined in advance) as a zooming target, and the region to be enlarged is designated by clicking the mouse." Conrad et al. teaches of a graphical user interface that opens and closes enclosures when an object is dragged over a location on top of an icon or text representing a closed enclosure. Column 11, lines 17 – 27, describes removing a select icon when the cursor is moved through a designated area. "In FIGS. 15A and 15B, another alternative sequence is shown. In this sequence, a dragged icon 1501 is dragged over a folder. When this occurs, a select icon appears, such as an opened folder icon 1502 with a split pie symbol. The split pie has a first side

1503 and a second side 1504. If the user moves the cursor downward to the second side 1504, as illustrated in FIG. 15B, then the sprung open enclosure is opened. Alternatively, if the user moves the cursor upward into the first side 1503, then some other action may occur. If user moves the cursor through the split pie, then the select icon is removed and the original icon reappears." Thus, Conrad teaches of removing the select symbol when the cursor is moved from a certain location. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Duke/Lee/Kaizuka to include removing the zoom symbol from the display area when the cursor symbol is moved. One would have been motivated to make such a modification to Kaizuka so that when a zooming function is not being performed on the selected portion of an image, the zoom symbol is quickly removed when a user moves the cursor symbol out of the zoom region, thus preventing any blocking of the image by the zoom symbol.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Woods October 19, 2006

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER